RG-AP630

Outdoor Wireless Access Point Series Datasheet

Ruijie RG-AP630 Series is a family of top-class 802.11ac wireless access points for next-gen high-speed wireless network applications. The RG-AP630 Series consists of 4 models—RG-AP630(IDA), RG-AP630(IDA2), RG-AP630(IODA) and RG-AP630(CD).

The RG-AP630 (IDA)/(IODA) offer access rates up to 1.75 Gbps, the RG-AP630(IDA2) supports 2.533Gbps access rate and the RG-AP630(CD) supports 1.167Gbps access rate. The RG-AP630 Series takes full care of security, RF control, mobile access, QoS, seamless roaming and other Wi-Fi aspects. Teaming up with Ruijie RG-WS Wireless Controller Series/ Cloud AC, the APs offer Wi-Fi user data forwarding, advanced security and access control with ease.

HIGHLIGHTS

- 802.11ac/802.11ac Wave 2 Superior Wireless Performance
- Built-in Smart Antenna & Lightning Arrester
- Outstanding Environmental Adaptability (IP67, -40-55°C)
- Unique PoE OUT Design

The industrial-class AP enclosure (IP67 rated) can withstand extreme outdoor conditions and hence simplify device installation and maintenance. The RG-AP630(IDA)/(IDA2) is built-in with directional antenna while the RG-AP630(IODA) offers internal omnidirectional antenna. An extensive collection of external antennas is also available to overcome various deployment challenges. Both AP models support automatic switching between the external and internal antennas. RG-AP630 (CD), equipped with built-in directional antenna, can achieve the outdoor Wi-Fi coverage under extreme outdoor conditions in vast majority of the scenarios. In addition, the RG-AP630(IDA)/(IODA) uniquely support a PoE OUT interface of 802.3at standard, facilitating streamlined integration with other monitoring devices for high-quality, real-time transmission of surveillance data. The PoE deployment makes the APs more adaptive to outdoor scenarios such as large campuses, enterprises, hospitals, commercial towers and settings alike. Multi-hop and point-to-multipoint wireless bridge features further enhance the deployment flexibility. The RG-AP630 Outdoor AP Series thereby offers unparalleled productivity in a wide variety of outdoor networking solutions.

RG-AP630(CD)

RG-AP630(IDA)/(IDA2)/(IODA)

Outdoor Antennas (from left to right):
RG-ANTx3-2400D, RG-ANTx3-5800D & RG-ANTx3-2400&5800(O)

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PRODUCT FEATURES

High Performance & Reliability

802.11ac Superior Wireless Performance

The RG-AP630 Series supports 802.11n@2.4GHz and 802.11ac@5GHz, with RG-AP630(IDA)/(IODA) offering access rates of up to 1.75Gbps, RG-AP630(IDA2) up to 2.533Gbps and RG-630(CD) up to 1.167Gbps. The outstanding wireless performance greatly optimizes wireless user experience, increases the number of concurrent users and enhances signal coverage.

Built-in Smart Antenna of AP630(IDA)/(IDA2) (IODA)

Equipped with built-in antenna, the RG-AP630 Series can achieve a real-time antenna beam switching based on the location of access devices, ensuring optimal wireless experience. The APs also support switching of internal and external antennas to flexibly adapt to any deployment scenarios.
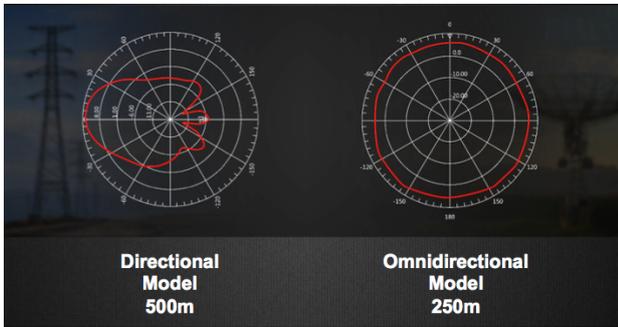
Built-in Directional and Omnidirectional Antennas of AP630

The Industry's Most Flexible Gigabit Uplink

The RG-AP630 Series offers a 10/100/1000Base-T Ethernet uplink port that rids the LAN port of being the wireless access bottleneck, and a 1000M SFP combo port that adapts to wired networking structure under different user scenarios. The SFP Base-X port takes up the data transmission workload for optimal network deployment.

Unique PoE OUT Design

By supporting a unique PoE OUT design, RG-AP630(IDA)/(IODA) can directly provide power to video surveillance equipment at the deployment location. The surveillance video data can be transmitted back to the control room in real time via the wired or wireless network. This feature not only reduces the difficulty of surveillance device installation, but also lowers the cost on new cabling. When deployed with HPoE switch, the ETH2/PoE OUT port of RG-AP630(IDA)/(IODA) can power other PD devices that support the 802.3at/af standards, and enable the data to be transmitted back to the AP uplink port.

PoE OUT Design
With downlink port for Surveillance IP Camera

PoE OUT Design of AP630(IDA)/(IODA)

Hardware Highlights

RG-AP630(IODA)

Interfaces

1. Console Port
2. 10/100/1000Mbps ETH2/PoE OUT Port
3. 10/100/1000Mbps ETH1/PoE IN Port
4. SFP Port (Combo with ETH1)
5. 3 2.4GHz N-K Type RF Connectors
6. 3 5GHz N-K Type RF Connectors

Easy-to-use Mount-Kit

An adjustable mount-kit is available by default for painless deployment optimization. The APs can be easily adjusted -60° to 60° horizontally and -60° to 90° vertically to adapt to various scenarios.
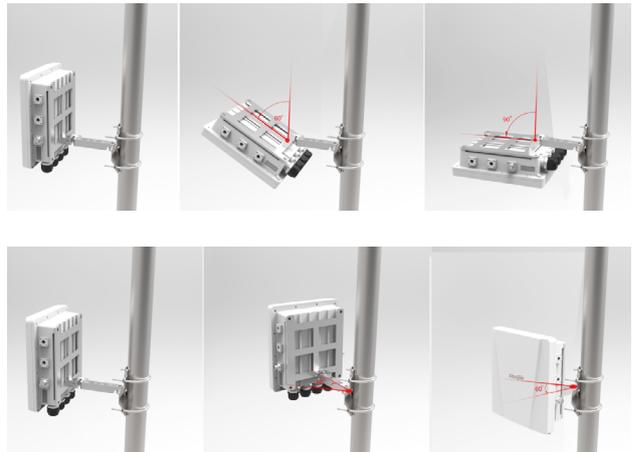
Adjustable Mount-kit of AP630

All-in-one Package for Painless Deployment

The RG-AP630 Outdoor AP Series offers you a one-stop installation package. Everything you need is included, from external antennas to lightning arresters and coaxial cables, for effortless outdoor deployment.

RG-AP630
built-in with *Internal Antenna (optional external antenna) & Lightning Arrester*

All-in-one Installation Package

Flexible WDS Mode

The APs implement WDS (Wireless Distribution System) to support interconnection of multiple APs or wireless bridging under 5 hops. Wireless bridging can be achieved even for a long distance. The outdoor APs also support point-to-multipoint bridging (CPE application scenarios) for more flexible networking. The features get over the outdoor deployment problems to support large-scale and remote high-speed wireless coverage.

Intelligent Device Recognition

The APs support intelligent recognition of end devices running mainstream operating systems such as iOS and Android.

Industry-leading Local Forwarding Technology

Employing an industry-leading local forwarding technology, the APs eliminate the traffic bottleneck of wireless access controllers. Deploying with the Ruijie RG-WS Wireless Controller Series, users can flexibly pre-configure the data-forwarding mode of the outdoor APs. The APs also control if the data will be forwarded via the wireless controller. The local forwarding technology can forward large-scale, delay-sensitive, and real-time transmission data to greatly alleviate the traffic pressure on the wireless LAN controllers and fulfill the high traffic transmission requirements of the 802.11ac network.

Seamless Roaming Experience

The APs team up with the RG-WS Wireless Controllers in perfect harmony, allowing wireless users to roam seamlessly on Layer 2 and Layer 3 networks without data interruption.

Abundant QoS Policies

The AP supports a wide range of QoS policies. For example, it provides WLAN/AP/STA-based bandwidth limitation modes that prioritize key services over others.

Outstanding Environmental Adaptability

The outdoor APs offer an IP67-rated enclosure that fulfills waterproof, dustproof, moisture-proof and flame retardant requirements to withstand harsh environments such as wind erosion, rain and high humidity. The features greatly lengthen the equipment life span and effectively reduce the maintenance cost.

Wide Operating Temperature Range

All the AP components and enclosures can withstand a wide temperature range from -40°C to 55°C without any influence on the stability and life span. The design ensures the metal components cool down efficiently at high temperatures. The built-in heater module guarantees stable operation under freezing conditions.

Comprehensive Security Policies

User Data Encryption

The outdoor APs offer protected Wi-Fi access with the support of cutting-edge encryption technologies such as WEP, TKIP and AES, guaranteeing the data transmission security of the wireless network.

Virtual AP Technology

With the virtual AP technology, the AP can offer up to 16 ESSIDs (per radio) and 16 802.1Q VLANs. The network administrator can separately encrypt and isolate subnets or VLANs that have the same SSID. A separate authentication mode and encryption mechanism for each SSID can also be configured flexibly.

Standard CAPWAP Encryption

CAPWAP (Control and Provisioning of Wireless Access Points) enables communication between RG-WS Wireless Controllers and the outdoor APs. The standard ensures secure data transmission.

RF Security

In collaboration with Ruijie's RG-SNC Smart Network Commander and RG-WS Wireless Controllers, the APs enable the RF probe scanning mechanism to detect unauthorized access points or other RF interference sources. Once detected, the APs will alert network administrator to monitor potential threats and usage status in the wireless environment.

User Access Control

The APs support a wide range of authentication methods such as Web, 802.1x, MAC address and local authentication. The APs also support Ruijie's advanced Security Management Platform (SMP) BYOD Solution which complies with a standard access control system. The system has a set of control policies in terms of user access, authorization, host compliance check, network behavior monitoring, network attack defense, etc. All these control features ensure that users are authenticated before accessing the network services securely.

Wireless Protection

Together with Ruijie's RG-SNC Smart Network Commander and RG-WS Wireless Controllers, the APs provide a powerful range of wireless security features such as Wireless Intrusion Detection System (WIDS), RF Interference Location, Rogue AP Countermeasures, Anti-ARP Spoofing and DHCP protection for a truly secure and reliable wireless network.

Wireless IPv6 Access

Comprehensive IPv6 features are available to enable IPv6 forwarding on a wireless network. Both IPv4 and IPv6 users can connect to the ACs over tunnels, enabling IPv6 applications to be borne on the wireless network.

Flexible Authentication Modes

The APs support convenient Protected Extensible Authentication Protocol (PEAP), SMS Authentication, and QR Code Authentication.

The PEAP Authentication allows users to perform password authentication for once only. That means users are only required to enter credentials during their first network visit.

If the SMS authentication is adopted, users first sign in with their mobile phone numbers and then receive an SMS with login username and password for network access.

QR code authentication is another wireless security highlight. After accessing a wireless network, users will obtain a QR code on their end devices and simply ask any authorized staff's to scan it for network access.

Flexible Device Management Mode

Flexible Switching Between the FAT & FIT Modes

The APs support flexible switching over the FAT and FIT modes according to the networking requirements of different industries. When there are few APs, users can adopt the FAT mode for easy independent network establishment. For large-scale networks, the APs can operate in FIT mode which allows centralized management of all the APs and other aspects such as security, traffic management, QoS and IP management when deployed with the RG-WS Wireless Controllers. Smooth transition from one to another, the APs fully protect user investment.

Simple Deployment With Zero Configuration

Under the FIT mode, no AP configuration is required before deployment. Also, no manual configuration is necessary for on-site installation, maintenance or replacement. Auto-configuration can be completed via the AC. This user-friendly feature can greatly reduce workload and investment costs.

Comprehensive Remote Management

The RG-WS Wireless Controllers or Cloud AC can remotely and centrally manage all AP operations such as channel, power ranking, SSID configuration, security configuration, VLAN division and so on. The feature enhances security and simplifies the wireless network management.

PoE Port For Easy Deployment & Maintenance

The RG-AP630(IDA)/(IDA2)/(IODA) support the 802.3at PoE standard while RG-AP630(CD) supports the 802.3af PoE standard. By connecting to a HPoE switch through the AP Ethernet port, the outdoor APs can gain power and support data transmission via cables. The network administrator can remotely perform configuration. It also solves the problem of unstable power source, simplifies the installation process and maximizes the cost savings.

TECHNICAL SPECIFICATIONS

Outdoor APs

Model		RG-AP630(IDA2)	RG-AP630(IDA)	RG-AP630(IODA)	RG-AP630(CD)
Target Deployments		For big campus, wireless city, harbor, storage room, mine			
Basic Specifications	Radio	Concurrent dual-radio dual-band			
	Protocol	802.11a/b/g/n/ac Wave2	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n/ac
	Operating Bands	802.11b/g/n: 2.4GHz to 2.483GHz 802.11a/n/ac: 5.150GHz to 5.350GHz, 5.47GHz to 5.725GHz, 5.725GHz to 5.850GHz (vary depending on countries)			
	Antenna	Built-in Directional Smart Antenna (support external/internal antenna switching)	Built-in Directional Smart Antenna (support external/internal antenna switching)	Built-in Omnidirectional Smart Antenna (support external/internal antenna switching)	Built-in directional antenna
	Antenna Gain	10dBi	10dBi	4dBi	10dBi

Model		RG-AP630(IDA2)	RG-AP630(IDA)	RG-AP630(IODA)	RG-AP630(CD)
Basic Specifications	Max Throughput	Build-in antenna model: 800Mbps@2.4G 1733Mbps@5G 2.533Gbps per AP; External antenna model: 400Mbps@2.4G 1733Mbps@5G 2.133Gbps per AP	450Mbps@2.4GHz 1.3Gbps@5GHz 1.75Gbps per AP	450Mbps@2.4GHz 1.3Gbps@5GHz 1.75Gbps per AP	300Mbps@2.4G 867Mbps@5G 1.167Gbps per AP
	Spatial Streams	4	3	3	2
	Modulation	OFDM: BPSK@6/9Mbps QPSK@12/18Mbps 16-QAM@24Mbps 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps DQPSK@2Mbps CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM and 256QAM			
	Receiver Sensitivity	11b: -99dBm(1Mbps), -93dBm(5.5Mbps), -90dBm(11Mbps) 11a/g:-93dBm(6Mbps), -85dBm(24Mbps), -82dBm(36Mbps), - 77dBm(54Mbps) 11n:-92dBm@MCS0, -73dBm@MCS7, -92dBm@MCS8, -73dBm@MCS15 11ac HT20: -90dBm (MCS0) , -63dBm (MCS9) 11ac HT40: -85dBm(MCS0) , -60dBm (MCS9) 11ac HT80: -82dBm(MCS0) , -58dBm (MCS9)			
	Maximum Transmit Power	27dBm Note: The transmit power is configurable to up to 15dBm in 1dBm steps. The actual transmit power depends on local laws and regulations.			
	Adjustable Power	1dBm			
	IP Rating	IP67			
Ports	Service Port	1 10/100/1000 Base-T ETH1/PoE IN port, 1 10/100/1000 Base-T ETH2 port, 1 1000M SFP port (combo)	1 10/100/1000Mbps ETH1/PoE IN port (RJ45 connector), 1 10/100/1000Mbps ETH2/PoE OUT port (RJ45 connector), 1 SFP port (combo with ETH1)	1 10/100/1000Mbps ETH1/PoE IN port (RJ45 connector), 1 10/100/1000Mbps ETH2/PoE OUT port (RJ45 connector), 1 SFP port (combo with ETH1)	1 10/100/1000Mbps ETH1/PoE IN port (RJ45 connector), 1 SFP port (combo with EHT1)
	Management Port	1 console port (RJ45 or Bluetooth)			
Power	Power Supply	PoE+ (802.3at)	PoE+ (802.3at) Support Ruijie 60W PoE adaptor@PSE (PoE OUT)	PoE+ (802.3at) Support Ruijie 60W PoE adaptor@PSE (PoE OUT)	PoE (802.3af) Compatible with PoE+
	Power Consumption	<25W	<25W	<25W	<12.95W
WLAN	Maximum clients per AP	Up to 512	Up to 256	Up to 256	Up to 256
	BSSID capacity	Up to 16 per radio Up to 32 per AP			
	SSID hiding	Support			

Model		RG-AP630(IDA2)	RG-AP630(IDA)	RG-AP630(IODA)	RG-AP630(CD)
WLAN	Configuring the authentication mode, encryption mechanism, and VLAN attributes for each SSID	Support			
	Remote Intelligent Perception Technology (RIPT)	Support			
	X-speed	Support			
	Intelligent load balancing based on the number of users or traffic	Support			
	STA control	SSID/radio-based			
	Bandwidth control	STA/SSID/AP-based speed control			
	Preference for 5 GHz (band select)	Support			
	Wireless position tracking	Support			
	Dynamic Frequency Selection (DFS)	Future Release Support			
Security	PSK, Web, and 802.1x authentication	Support			
	Data encryption	WPA (TKIP) , WPA2 (AES), WPA-PSK, and WEP (64 or 128 bits)			
	QR code authentication	Support			
	SMS authentication	Support			
	PEAP authentication	Support			
	Data frame filtering	Whitelist, static/dynamic blacklist			
	User isolation	Support			
	Rogue AP detection and countermeasure	Support			
	Dynamic ACL assignment	Support			
	RADIUS	Support			
	CPU Protection Policy (CPP)	Support			
	Network Foundation Protection Policy (NFPP)	Support			
	Wireless Intrusion Detection System (WIDS)	Support			
	Wireless Intrusion Prevention System (WIPS)	Support			
Routing	IPv4 address	Static IP address or DHCP reservation			
	IPv6 CAPWAP tunnel	Support			
	ICMPv6	Support			
	IPv6 address	Manual or automatic configuration			
	ISATAP	Support			
	Multicast	Support	Multicast to unicast conversion	Multicast to unicast conversion	Multicast to unicast conversion

Model		RG-AP630(IDA2)	RG-AP630(IDA)	RG-AP630(IODA)	RG-AP630(CD)
Management and Maintenance	Network management	SNMP v1/v2C/v3, Telnet, SSH, TFTP and web management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and web management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and web management	SNMP v1/v2C/v3, Telnet, SSH, TFTP, and FTP and web management
	Visualized wireless heat map analysis	Support (needs to integrated with SNC)			
	Real-time spectrum analysis	Support (needs to integrated with SNC)			
	Fault detection and alarm	Support			
	Cloud AC management	Support			
	Statistics and logs	Support			
	FAT/FIT switching	The AP working in FIT mode can switch to the FAT mode through the RG-WS wireless AC. The AP working in FAT mode can switch to the FIT mode through a local console port or Telnet.			
External Characterisitics	Lock	Support			
	LED Indicators	Power status and WDS signal strength			
Relevant Standard	Wi-Fi Alliance Certification	Support			
	Safety Standard	GB4943, EN/IEC 60950-1, EN/IEC 60950-22	GB4943, UL/CSA 60950-1, EN/IEC 60950-1, EN/IEC 60950-22	GB4943, UL/CSA 60950-1, EN/IEC 60950-1, EN/IEC 60950-22	GB4943, UL/CSA 60950-1, EN/IEC 60950-1, EN/IEC 60950-22
	EMC Standard	GB9254-2008, EN301 489, EN55022	GB9254-2008, EN301 489, EN55022, FCC Part15	GB9254-2008, EN301 489, EN55022, FCC Part15	GB9254-2008, EN301 489, EN55022, FCC Part15
	Health Standard	EN 50385	FCC Bulletin OET-65C, EN 50385, IC Safety Code 6	FCC Bulletin OET-65C, EN 50385, IC Safety Code 6	FCC Bulletin OET-65C, EN 50385, IC Safety Code 6
	Radio Standard	FCC Part15, EN300328, EN301893			
	Vibration Standard	GB/T 2423			
Specifications	Dimensions (W x D x H) (mm)	276 × 246 × 90			
	Weight	<2.5kg			
Work Environment	Temperature	Operating Temperature: -40°C to 65°C (heater module will be enabled at -15°C)	Operating Temperature: -40°C to 55°C (heater module will be enabled at -15°C)	Operating Temperature: -40°C to 55°C (heater module will be enabled at -15°C)	Operating Temperature: -40°C to 55°C (heater module will be enabled at -15°C)
		Storage Temperature: -40°C to 85°C	Storage Temperature: -40°C to 70°C	Storage Temperature: -40°C to 70°C	Storage Temperature: -40°C to 70°C
	Humidity	Operating Humidity: 0% to 100% (non-condensing)	Operating Humidity: 5% to 95% (non-condensing)	Operating Humidity: 5% to 95% (non-condensing)	Operating Humidity: 5% to 95% (non-condensing)
		Storage Humidity: 0% to 100% (non-condensing)	Storage Humidity: 5% to 95% (non-condensing)	Storage Humidity: 5% to 95% (non-condensing)	Storage Humidity: 5% to 95% (non-condensing)
Installation Mode		Wall/pole-mount installation			

Outdoor Antennas

Model	RG-ANTx3-2400D	RG-ANTx3-5800D	RG-ANTx3-2400&5800(O)
Type of External Antenna	Directional	Directional	Omnidirectional
Electrical Specifications — Frequency range	2.4 to 2.483GHz	5.125 to 6.100GHz	2.4 to 2.5GHz; 5.125 to 6.100GHz
Gain	3 × 15dBi	2 × 19dBi (vertical) + 16dBi (dual inclined planes)	8 dBi
Horizontal beamwidth	65°	21°	360°
Vertical beamwidth	16°	16°	17°
Front-to-back ratio	≤ -25 dB	≤ -25 dB	≤ -25 dB
VSWR	≤ 1.5	≤ 1.5	≤ 1.5
Polarization	2*VP (vertical polarization) +1*HP (horizontal polarization)	±45° and vertical polarization	VP (vertical polarization)
Input impedance	50 ohms	50 ohms	50 ohms
Mechanical Specifications — Mounting mode	Pole mounting (pole diameter 30 to 50 mm)	Pole mounting (pole diameter 50 to 120 mm)	Pole mounting (pole diameter 40 to 70 mm)
Temperature range	-40°C to 60°C	-40°C to 60°C	-40°C to 60°C
Unit weight	2.3 kg	1.3 kg	1.2 kg
Dimensions	400 × 240 × 35 mm (L × W × H)	380 × 380 × 33 mm (L × W × H)	Φ145 × 330 mm
Connector	3 × N-K	3 × N-K	6 × N-K

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ORDERING INFORMATION

Model	Description
RG-AP630(IDA)	Outdoor Wireless Access Point, IP67 rating, built-in directional smart antenna and lightning arrester, 3×3 MIMO, 3 spatial streams, support internal/external antenna switching, support PoE Out for IP Camera connection, support concurrent 802.11a/b/g/n/ac, FAT/FIT mode, PoE+ (Installation Mount-Kit included, but PoE adaptor sold separately)
RG-AP630(IDA2)	Outdoor Wireless Access Point, IP67 rating, built-in directional smart antenna and lightning arrester, 4×4 MIMO, 4 spatial streams, support internal/external antenna switching, support concurrent 802.1 1a/b/g/n/ac and Wave 2, FAT/FIT mode, PoE+ (Installation Mount-Kit included, but PoE adaptor sold separately)
RG-AP630(IODA)	Outdoor Wireless Access Point, IP67 rating, built-in omnidirectional smart antenna and lightning arrester, 3×3 MIMO, 3 spatial streams, support internal/external antenna switching, support PoE Out for IP Camera connection, support concurrent 802.11a/b/g/n/ac, FAT/FIT mode, PoE+ (Installation Mount-Kit included, but PoE adaptor sold separately)
RG-AP630(CD)	Outdoor Wireless Access Point, IP67 rating, built-in directional antenna and lightning arrester, 2×2 MIMO, 2 spatial streams, support concurrent 802.11a/b/g/n/ac, FAT/FIT mode, PoE (Installation Mount-Kit included, but PoE adaptor sold separately)
Optional Accessories	
RG-S2910-24GT4SFP-UP-H	24 10/100/1000BASE-T ports for downlink and 4 Gigabit SFP ports (non-combo) for uplink. To support HPoE (Port1-4), PoE+, PoE, 1 console port
Optional External Antennas	
RG-ANTx3-2400D	2.4GHz MIMO Outdoor Directional Antenna Kit, include: 15dBi panel antenna (1 set); 1-meter N-N coaxial cables (3 sets); waterproof materials (1 set)
RG-ANTx3-5800D	5.8GHz MIMO Outdoor Directional Antenna Kit, include: 19dBi panel antenna (1 set); 1-meter N-N coaxial cables (3 sets); waterproof materials (1 set)
RG-ANTx3-2400&5800(O)	2.4GHz & 5.8GHz MIMO Outdoor Omnidirectional Antenna Kit, include: 8dBi panel antenna (1 set); 1-meter N-N coaxial cables (6 sets); waterproof materials (2 sets)

For further information, please visit our website http://www.ruijienetworks.com

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